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3. The report is being provided to the appropriate agencies and departments for their review and comment.

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MOROSHKIN, K.V.

Electromagnetic measurements of currents in the waters  
of the Indian Ocean. Inform. biul. Sov. antark. eksp. no. 7:22-25 '59  
(MIRA 13:3)

1. Nachal'nik gidrologicheskogo otryada Vtoroy morskoy ekspeditsii.  
(Indian Ocean--Ocean currents)

KLEPIKOV, V.V., kand. geogr. nauk; MOROSHKIN, K.V.; BOGOYAVLENSKIY, A.N.;  
NAZAROV, V.S.; MAKSIMOV, B.A.; ZHIVAGO, A.V.; BRODSKIY, K.A.;  
KOLTUN, V.M.; ANDRIYASHEV, A.P.; PAKHAREVA, M.M., red.; KOTLYAKOVA,  
O.I., tekhn. red.

[Transactions of the Soviet Antarctic Expedition.] Trudy Sovetskoi  
antarkticheskoi ekspeditsii, 1955. Leningrad, Izd-vo "Morskoi  
transport." Vol.22. [Third Sea Expedition of the diesel-electric ship  
Ob', 1957-1958; observational data] Tret'ia morskaya ekspeditsiya na  
d/e "Ob'" 1957-1958 gg.; materialy nabludeni. Pod red. V.V.Klepiko-  
va. 1961. 233 p. (MIRA 14:11)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955.  
(Antarctic regions—Oceanographic research)

MORCHHEIN, E. J.

A NEW FORM OF THE ... 1981 ...  
... 1981 ...

1. ...

10.40004

8(6)

69182

S/143/60/000/03/020/020  
D047/D002

AUTHOR: Geller, Z.I. Candidate of Technical Sciences; Moroshkin,  
M.Ya., Engineer

TITLE: Hydraulic Characteristics of Centrifugal Nozzles <sup>3</sup>

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika,  
1960, Nr 3, pp 143-150 (USSR)

ABSTRACT: This gives a method of calculating the flow coefficient  
of nozzles used in boiler installations in relation to  
the construction of the nozzle and experimental data  
on the angle of the jet. G.N. Abramovich and L.A.  
Klyachko had previously described the operation of  
nozzles, but the ones they dealt with differ from those  
used to spray fuel in boiler installations. To find a  
method for calculating the flow coefficient and obtain  
data on the angle of the jet, the author carried out  
experimental investigations into the hydraulic charac-

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S/143/60/000/03/020/020  
D047/D002

Hydraulic Characteristics of Centrifugal Nozzles

teristics of nozzles, shown in Figures 3, 4 and 5, used in boiler installations. Figure 2 shows the circulation apparatus which was used. Fuel consumption was determined by a measuring tank. Pressure before the nozzles was measured by a reference manometer. Viscosity of the fuel was varied by heating. The results of the tests are given in the form of graphs and compared with those obtained by previous investigators. Figure 1 also shows graphs for the relationship of the flow coefficient to geometrical characteristics, calculated according to the methods of V.I. Skobelkin, and D.I. Taylor, and which hardly differ from the graph given in [Ref. 3]. Figures 3, 4 and 5, besides showing the flow coefficients, also give the experimental data on the angles of the jet, which differ from those obtained by calculation [Ref. 3]. There

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S/143/60/000/03/020/020  
DO47/D002

Hydraulic Characteristics of Centrifugal Nozzles

are 1 diagram, 5 graphs and 4 references, of which 1  
is English and 3 Soviet.

ASSOCIATION: Groznenskiy ordena Trudovogo Krasnogo Znameni neftyanoy  
institut (Groznyy Order of the Red Banner of Labour  
Oil Institute) ✓

PRESENTED: October 23, 1959, by the Nauchno-tekhnicheskaya sekt-  
siya turbomashin (Scientific and Technical Section of  
Turbines)

Card 1/3

MOROSHKIN, M.Ya.; GELLER, Z.I.

Choosing a substance for modeling the atomization process of  
highly viscous residues. Izv. vys. ucheb. zav.; neft' i gaz  
3 no.5:101-104 '80. (KERA 15:6)

1. Gрозnefskiy neftyanoy institut.  
(Atomization) (Liquid fuels)



21322  
S/143/60/000/012/007/007  
A163/A026

26.2131

AUTHOR: Moroshkin, M. Ya., Engineer

TITLE: The effect of pressure drop on the operation of swirl atomizers

PERIODICAL: Energetika, no. 12, 1960, 83 - 91

TEXT: The article deals with the effect pressure drops on the operation of swirl atomizers. The author makes an attempt to find out the best conditions for the flow of fuel from the inlet channels to the coiling chamber, and to develop a method for determining the optimum geometrical internal dimensions of an atomizer. The experimental part of the research work was performed with the help of a circulation installation described by Geller, Z. I., and Moroshkin, M. Ya. (Ref. 5: Gidravlicheskiye kharakteristiki tsentrobyezhnykh forsunok. "Izv. Vuzov SSSR - Energetika", No. 3, 1960). Tests were carried out with mazut by using tangential swirl atomizers with rectangular inlet channels, and atomizers having round-section channels leading to the coiling chambers and placed at an angle to the axis of the nozzle. All tests were performed with Reynolds' numbers exceeding 1,300.

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3/143/60/000/012/007/007  
A163/A026

The effect of pressure drop ....

The latter determined the best conditions for the flow of fuel in the inlet channels - as regards the effect of the intensity of friction on the hydraulic characteristics of the atomizers. As a result, the pressure losses in both atomizers have the least value at Reynolds' numbers of 3,000 - 5,500. These values determine the best conditions for the flow of fuel in the inlet channels, as regards the effect of the pressure drops on the hydraulic characteristics of atomizers. Figure 2 illustrates the effect of the Reynolds criterion in the inlet channels on the hydraulic parameters of swirl atomizers. For comparison reasons, experimental data of N.N. Strulevich (curve 5) are presented. To reduce the internal geometrical dimensions of atomizers on hydraulic parameters, test were carried out with atomizers by slightly modifying the geometrical parameters. The internal geometrical dimensions of the atomizers have an essential effect on the values of the hydraulic parameters. These magnitudes are determined by the values of the geometrical characteristic A, geometrical parameters B, and the value

$$D = \frac{d_c}{d_{vkh}} \quad (9)$$

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S/143/60/000/012/007/007

A163/A026

The effect of pressure drop ....

where  $d_c$  = the diameter of the nozzle, and  $d_{vkh}$  = the diameter of the inlet channel. The effect of the geometrical characteristic A on the hydraulic parameters is described in the work by G. N. Abramovich (Ref. 1: Teoriya tsentrobeznoy forsunki. Promyshlennaya aerodinamika. Izd. BNT NKAP, 1944) and Z. I. Geller and M. YA. Moroshkin (Ref. 5). The author determines the best values of the geometrical parameters A, B, and D for atomizers used in boiler engineering and incurring pressure losses in the head piece. By using the equation

$$A_{ed} = \frac{2}{\lambda} \frac{D}{2B - D} \quad (15)$$

(where  $\lambda$  = the coefficient of the friction in the coiling chamber), it is possible to determine - with the help of two known and most favorable parameter values - the optimum value of the third parameter for the corresponding atomizer design. Experimental data published by Geller and Moroshkin (Ref. 5) permit one to set up the following formulae for determining the coefficient of consumption and the angle of the jet:

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The effect of pressure drop ....

$$\mu = 0,451 A_{ed}^{-0,690} \quad (16)$$

$$\alpha = 2 \arctg N A_{ed}^k \quad (17)$$

In the last formula, N and k are constant values. Figure 5 shows the dependence of the  $\frac{\delta}{d_c}$  relation on the equivalent effective characteristics of swirl atomizers. The curves of Figure 5 may be approximated by the formula

$$\delta = d_c \frac{T}{A_{ed}^e} \quad (19)$$

where  $d_c$  = the diameter of the nozzle, and T and e are constant values for each curve. The author concludes by pointing out that the above data are necessary for analyzing the operation of swirl atomizers and for making a generalized hydraulic design for atomizers operating with a considerable pressure drop. There are 6 figures, 2 tables and 13 references: 10 Soviet-bloc and 3 non-Soviet-bloc. The English language publications read as follows: Doumas M. and Laster R. Liquid Film Properties for Centrifugal Spray

Card 4/6

21322

S/143/60/000/012/007/007

A 163/A026

The effect of pressure drop ....

Nozzles, Chemical Engineering Progress, October, 1953; Radcliffe A. The performance of a type of swirl atomizer, Proc. of the Institution of Mechanical Engineers, vol. 169, No. 3, 1955; Taylor G. The mechanics of Swirl atomisers, Proc. of the 7-th Internat Congress for appl. Mechanics, London, 1948.

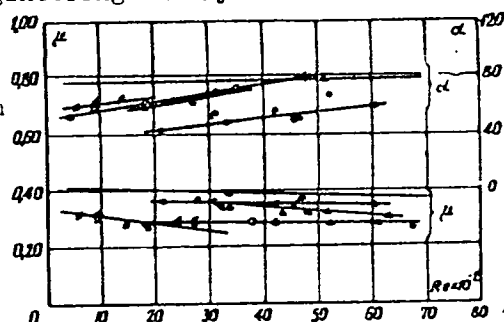
ASSOCIATION: Groznenskiy neftyanoy institut (Groznyy Petroleum Institute)

PRESENTED: by the Department of Heat Engineering and Hydraulics

SUBMITTED: February 22, 1960

Figure 2: Effect of Reynolds criterion in inlet channels on hydraulic parameters

Card 5/6



GELLER, Z.I., doktor tekhn.nauk, prof.; MOROSHKIN, M.Ya., kand.tekhn.nauk

Methodology for calculating and designing centrifugal jets for atomizing  
fuel oils. Teploenergetika 10 no.4:87-91 Ap '63. (MIRA 16:3)  
(Furnaces) (Boilers) (Oil burners)

L 45612-66 EWT(1) WW

ACC NR: AP6025427

(N)

SOURCE CODE: UR/0143/66/000/007/0121/0123

AUTHOR: Moroshkin, M. Ya. (Candidate of Technical Sciences)

ORG: Groznyy Institute of Petroleum (Groznerskiy neftyanoy institut)

TITLE: Utilization of available pressure in centrifugal nozzles

SOURCE: IVUZ. Energetika, no. 7, 1966, 121-123

TOPIC TAGS: nozzle design, nozzle flow, pressure, steam boiler, Reynolds number, atomization

ABSTRACT: An analysis of available pressure utilization in the operation of centrifugal nozzles used with steam boilers is carried out. It is shown that the entire available pressure is most effectively utilized in tangential nozzles with inlet channels of circular cross section and in TsKKB-type nozzles. It is suggested that the nozzles analyzed in this study be operated at a Reynolds number of at least 3000 in order to decrease pressure loss in the atomizer head and increase the tangential velocity head. Orig. art. has: 2 figures.

SUB CODE: 20,13/ SUBM DATE: 21Mar66/ ORIG REF: 001

Cord 1/1 mjs

UDC 621.43.037

MOROSHKIN, N.M.

Special design of taxicabs and rental automobiles. Avt. prom.  
29 no.4:33 Ap '63. (MIRA 16:6)

1. Upravleniye taksomotornogo transporta.  
(Taxicabs) (Automobiles, Rental)



*Handwritten:* 1/10/57

МОСКОВСКИЙ

Efficient and new techniques in automotive passenger transportation  
in Moscow. Garikhov, Mosk. 31 no.8:17-22 Ag '57. (MIRA 10)

Направление управления пассажирского автотранспорта  
Москвы. (Moscow--Transportation, Automotive)

MOROSHKIN, V. Ye., inzhener

Remote control of valves, vents, and slide gates in the chemical industry. (Hydraulic, electric, and combined systems) Khim.prom. no.6:159-166 Je '47. (MIRA 8:12)

1. Nachal'nik proizvodstva kislorodnogo izoliruyushchego protivogaza zavoda Ministerstva khimicheskoy promyshlennosti SSSR. (Valves) (Chemical plants)

5(1) 25(5)

AUTHORS: Morozkin, V. Ya., Vainov, V. A., et al. 1975 - 1976

TITLE: Experience in Overall Automation of an Industrial Plant (Plant for the Production of Ethyl Acetate and Ethyl Acetate Derivatives)

PERIODIC L: Khimicheskaya Promyshlennost', 1976, No. 4, pp. 401 - 403 (USSR)

ABSTRACT: Over the three years of operation of the industrial plant for the production of ethyl acetate and ethyl acetate derivatives (Vainovskiy zavod) (Vainovskiy Zavod) (Vainovskiy Zavod) has been gathered which can be used for the automation of the plant. The automation is carried out in the following order: 1) Extraction of the ethyl acetate solution from the ethyl acetate in the distillation column (2. which, 710 m. for the distillation of the ester acid layer (rectification column, 710 m. for the volume of ethyl acetate, surface of the condenser, surface of reboiler 15 sq. m). 2) Rectification of the ester-acid layer for the production of ethyl acetate, separation of water in the distillation column, 710 m.

Card 1/3



Experience in Overall Automation of an Acetic Acid  
 Production Plant

S. V. Kozlov - 1971

be reduced by 5 - 12%. Ethyl acetate consumption per ton of acetic acid dropped by 17.2%, steam consumption by 13.6%, electric power by 11.5%, water by 14.4%. It was possible to reduce the staff of the department by 3.4%, while productivity increased by 4.4%. Thus the cost price of acetic acid dropped by 17.5%, annual saving amount to 2.6 million roubles. On the basis of the experience acquired a plan for the improvement and expansion of automation has been drawn up. There are 5 figures.

Car: 3/3

MOROSHKIN, YU. F.

Moroskin, Yu. F. The determination of configurations of mechanisms. Doklady Akad. Nauk SSSR (N.S.) 82, 533-536 (1952). (Russian)

A needlessly involved discussion of the trivial fact that the equations defining the relative positions of the members of a linkage can be stated in terms of the relative directional cosines of coordinate frames connected rigidly with the members. The advantages, if any, of this unfashionable approach are not mentioned.

A. W. Wundheiler.

Sm5 BK

Source: Mathematical Reviews.

Vol 13 No. 7

MOROSHKIN, YU.F.  
MOROSHKIN, YU.F.

②  
Moroshkin, Yu. F. On forms of the basic equations of the geometry of mechanisms. Doklady Akad. Nauk SSSR (N.S.) 91, 745-748 (1953). (Russian)

This incontinent paper, as does a previous one [same Doklady (N.S.) 82, 533-536 (1952); these Rev. 13, 697],

deals not with mechanisms but with unramified spatial chains of rigid links. It announces a "solution" (in the Pickwickian sense of the word) of the "configuration problem". Stripped of bombastic verbiage ("the ultimately laconical form of the equations . . .") and of its largely ornamental welter of indices, the paper reveals that the position of a link  $B$  with respect to the preceding one  $A$  can be described by a matrix  $[B/A]$  (this is not the author's notation) such that  $[C/A] = [C/B][B/A]$ . This, coming from a neighborhood which produced Dimentberg's ingenious and intricate work [The determination of the positions of spatial mechanisms . . . , Izdat. Akad. Nauk SSSR, Moscow, 1950; these Rev. 12, 867] on just a special case of a spatial four-bar linkage, shows the author's nice sense of the grotesque.

A. W. Wundtlicher (Chicago, Ill.)

MOROSHKIN, Yu.F.

Bases of analytical theory of mechanisms. Trudy Sem.teor.mash. 14 no.54  
25-50 '54. (MLRA 7:10)  
(Mechanical movements)



AUTHOR: Moroshkin, Yu.F.

20-119-1-9/52

TITLE: On the Geometry of Compound Kinematic Chains (Voprosy geometrii slozhnykh kinematicheskikh tsepey)

PERIODICAL: Doklady Akademii Nauk, 1958, Vol 119, Nr 1, pp 38-41 (USSR)

ABSTRACT: A kinematic chain is compound if for every two kinematic pairs  $P_j, P_k$  of the chain there exists at least one simple compound contour  $C$  belonging to the chain, to which there belong  $P_j$  and  $P_k$ . The compound chain  $S = S_0 \dots S_n$  is considered. Simple compound contours of a system belonging to  $S$  are called independent if each of these contours contains at least one kinematic pair belonging to no other contour. Let  $\lambda$  be the multiplicity of a chain term and  $n^{(\lambda)}$  be the number of terms with the multiplicity  $\lambda$ . Further let  $c$  be the number of the independent compound simple contours belonging to  $S$ . We have

$$c = 1 + \frac{1}{2} \sum_{\lambda=2}^{\lambda_{\max}} (\lambda-2)n^{(\lambda)}.$$

If  $n+1$  is the number of terms and  $p$  is the number of pairs of  $S$ , then

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On the Geometry of Compound Kinematic Chains

20-119-1-9/52

$$\sum_{\lambda=2}^{\lambda_{\max}} \lambda_n^{(\lambda)} = 2p \quad \text{and} \quad \sum_{\lambda=2}^{\lambda_{\max}} n^{(\lambda)} = 1 + n,$$

such that  $c = p - n$ .

The author gives several further partially very important relations such that the motion problem of a compound kinematic chain is solved in this sense.

There is 1 Soviet reference.

PRESENTED: May 10, 1957, by I.I. Artobolevskiy, Academician

SUBMITTED: June 8, 1957

Card 2/2

MOROSHAKIN, Yu. V.

Computation stability in solving the Cauchy problem for the  
equation  $y' = f(x, y)$  by Adams' method. Vest. Mosk. un. Ser.  
1: Mat., mekh. 18 no. 6:3-11 N-D'63. (MIRA 17:2)

1. Kafedra vychislitel'noy matematiki Moskovskogo universiteta.

USSR/Medicine - Gingivitis, Therapy Jul/Aug/Sep 48  
Medicine - Sulfanilamide and Sulfanilamide Derivatives, Therapy

PA 34/49773  
"Concerning Problem of Treatment of a Pathologic Gingival Pocket With Sulfidin," Docent Yu. A. Koz'min, E. A. Morosikina, Chair of Therapeutic Stomatol, Chair of Histology, Irkutsk State Stomatol Inst, 2 pp

"Stomatologiya" No 3

Material on 47 cases. Hypertrophic gingivitis is an inflammatory process with deep degenerative alterations in both epithelium and adjoining tissues. Sulfidin, injected into the gingival pocket prevents

34/49773

USSR/Medicine - Gingivitis, Therapy Jul/Aug/Sep 48  
(Contd)

ulceration of the gum tissue or cause of necrosis and hemorrhage. Quantitative and qualitative changes in microflora occur. The pocket disappears in all forms of gingival inflammation, except cases where the basic disease is periodontosis.

34/49773

MOROSIKINA, E. A.

DOMETTI, A.A.; ZIMINA, R.M.; KALININ, F.P.; LAKTIONOVA, P.I.; MOROSHEINA, O.I.;  
MYASISHCHEVA, Ye.I.; NECHAYEVA, Yu.A.; PREOBRAZHENSKIY, A.I.; RUSH,  
V.A.; RYNDIN, A.A.; SAUCHKIN, Yu.G.; STROYEV, E.P.; TIKHONOV, P.G.  
[deceased]; FREYKIN, Z.G.; SHESTAKOV, V.N.

Nikolai Nikolaevich Baranskii's 80th birthday. Geog. v shkole 24  
no.4:7-8 JI-Ap '61. (MIRA 14:8)  
(Baranskii, Nikolai Nikolaevich, 1881)

BIBIK, A.Ye.; DOMETTI, A.A.; ZIMINA, A.M.; LAKTIONOVA, P.I.; MAKSIMOV,  
N.A.; MOROSHKINA, O.I.; MYASISHCHEVA, B.I.; ERDELI, V.G.;  
NECHAYEVA, Yu.A.; PADEZHNOV, A.I.; PREOBRAZHENSKIY, A.I.;  
RAUSH, V.A.; RYNDIN, A.A.; SAUSHKIN, Yu.G.; SMIRNOVA, N.P.;  
STROYEV, K.F.; TOPORKOV, I.D.; FREYKIN, Z.G.

Fedor Pavlovich Kalinin; obituary. Geog. v shkole 26 no.2:85  
Mr-Ap '63. (MIRA 16:4)

(Kalinin, Fedor Pavlovich, 1899-1962)

MOROSHKINA, T. M.

✓ 3818. Spectrochemical determination of small amounts of vanadium in samples of complex composition. T. M. Moroshkina and V. K. Prokof'ev. Izv. Akad. Nauk SSSR, Leningrad State Univ., 24th Ser. Anal. Khim., 1968, 11 (6), 714-718.—Samples of ores containing from 0.01 to 0.08% of V are specially prepared, together with similar samples containing known added amounts of V, by heating them in a reducing atmosphere in a special furnace to give compact masses which are then excited in a stabilised a.c. arc.

G. S. SMITH

RMJ 1/1  
in

Moroshkina, T. M.

Reaction of metal oxides with alcohols. III. Oxides of manganese and isopropyl and other alcohols. V. A. Komarov, N. P. Timofeeva, and T. M. Moroshkina (State Univ., Leningrad). *Zhur. Obshch. Khim.* 26, 893-8 (1958); cf. C.A. 48, 9799g. — Passage of iso-PrOH over Mn oxides ( $MnO$ ,  $Mn_2O_3$  or  $MnO_2$ ) was examd. up to 400°. On metallic Mn the decompn. commences at 342°, on  $MnO$  at 390-392°, on  $Mn_2O_3$  at 398°, and at 308-40° on  $MnO_2$ . Along with decompn. of the alc. there takes place a reduction of the oxides to  $MnO$ . The decompn. products are  $Mn_2CO$  and  $H_2$ . Metallic Mn is only surface oxidized slightly and causes a dehydration reaction, being more active than the oxides in this respect; dehydrogenation is predominant in all instances. The decompn. temp. rises with increased mol. wt. of the alc. from EtOH,  $C_2H_5OH$ ,  $C_3H_7OH$ , and  $C_4H_9OH$ . The final product of action is an Mn oxide corresponding to  $MnO_{1.5}$  or  $MnO_{1.4}$ , which retains the x-ray pattern of  $MnO$ . The apparent activation energy of decompn. rises somewhat with increased mol. wt. of the alc. used. The results are shown graphically. G. M. K.



24(7)

PHASE I BOOK EXPLOITATION

20V/1700

Ukr. Universitet

Materialy I Vsesoyuznogo sveshcheniya po spektroskopii, 1956.  
t. II. Atomnaya spektroskopiya (Materials of the 10th All-Union  
Conference on Spectroscopy, 1956. Vol. 2: Atomic Spectroscopy)  
/Groz' Ied-vo L'vovskogo univ., 1958. 568 p. (Series: It's  
Naukovedsky sbornik, vyp. 4(5)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po  
spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.);  
B.S. Reporent, Doctor of Physical and Mathematical Sciences;  
I.M. Fabellinskiy, Doctor of Physical and Mathematical Sciences;  
V.A. Fabrikant, Doctor of Physical and Mathematical Sciences;  
V.S. Koritskiy, Candidate of Physical and Mathematical Sciences; L.K. Kiselevskiy,  
Candidate of Physical and Mathematical Sciences; V.J. Milyanchuk  
(Chairman), Doctor of Physical and Mathematical Sciences; A.Ye.  
Glasbein, Doctor of Physical and Mathematical Sciences;  
M.I. G.L. Gasser, Tech. Ed.; T.V. Saranyuk.

Purpose: This book is intended for scientists and researchers in  
the field of spectroscopy, as well as for technical personnel  
using spectrum analysis in various industries.

Coverage: This volume contains 177 scientific and technical studies  
of atomic spectroscopy presented at the 10th All-Union Confer-  
ence on Spectroscopy in 1956. The studies were carried out by  
members of scientific and technical institutes and include  
extensive bibliographies of Soviet and other sources. The  
studies cover many phases of spectroscopy: spectra of the earth,  
electromagnetic radiation, physicochemical methods for controlling  
uranium production, physical and chemical methods for determining  
optical and spectroscopy, spectral analysis of gas discharges,  
spectroscopy and the combustion theory, spectrum analysis of ores  
and minerals, photographic methods for quantitative spectrum  
analysis of metals and alloys, spectral determination of the  
hydrogen content of metals by means of isotopes, tables, and  
atlases of spectral lines, spark spectrographic analysis,  
statistical study of variation in the parameters of calibration  
curves, determination of traces of metals, spectrum analysis in  
metallurgy, the geochemistry in metallurgy, and principles and  
practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.)	20V/1700
Buzarov, A.K., and V. G. Giltrov. Spectral Analysis of Ores by Blowing Powder Samples into the Arc Discharge	102
Hedler, V.V., and A.A. Friesberg. Reasons for Reproducibility Improvement in Spectrum Analysis by the Spilling Method	106
Ivanov, E.P. Spectral Determination of the Uranium Content of Ores and Intermediate Products by the Isotope Addition Method	109
Prokof'ev, V.K., and Morozkina, E.M. Direct Spectral Determination of Small Quantities of Uranium and Vanadium in Natural Samples	112
Prokof'ev, V.K., T.M. Mikhaylovskiy, and I.V. Bogdanova. Spectrochemical Analysis of Rare Elements in Complex Solutions by Ion-exchange Absorption	112
Shernina, G.A., and M.M. Ezer. Quantitative Spectral Determination of the Fe and Co Content of Rocks and Minerals by the Additive Method	115

Card 3/31

PROKOF'YEVA, V.K.; MOROSHEINA, T.M.

Direct spectral determination of small quantities of uranium  
and vanadium in crude samples of U and V. Fiz.sbor. no.4:112  
'58. (MIRA 12:5)

1. Khimicheskiy fakul'tet Leningradskogo ordena Lenina gosudar-  
stvennogo universiteta imeni A.A.Zhdanova.  
(Uranium--Spectra) (Vanadium---Spectra)

PROKOF'YEV, V.K.; MOROSHKINA, T.M.; BOGDANOVA, I.V.

Spectrochemical analysis of rare elements in complex solutions  
by means of ion exchange adsorption. *Fiz.sbor.* no.4:112-114  
'58. (MIRA 12:5)

1. Khimicheskiy fakul'tet Leningradskogo ordena Lenina gosudar-  
stvennogo universiteta imeni A.A.Zhdanova.  
(Metals, Rare and minor--Spectra) (Ion exchange)

*Moroshkina, T.M.*

AUTHORS: Moroshkina, T.M., Prokof'yev, V.I., Smirnova, M.N. 32-11-22/60

TITLE: The Spectrometric Determination of Low Uranium Content in Natural Samples (Spektrokhimicheskoye opredeleniye malykh kolichestv urana v prirodnykh obratsakh)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1324-1327 (USSR)

ABSTRACT: An uranium content of  $10^{-3}$ - $10^{-4}$  % is concerned here. As may be seen from published works available it has hitherto not yet been possible to attain the necessary sensibility of determination, especially because the spectral determination of uranium presents difficulties. It is suggested in this paper to prepare standard samples ("etalons") from the samples to be analyzed by the method of admixtures (4). It was found that uranium, which does not vaporize easily, could be vaporized more easily from the melt crust than otherwise, which may be explained by the fact that the crust possesses greater electric conductivity. Besides, it may be assumed that at temperatures of 1300-1500°, at which the crusts are formed, uranium is regenerated to the metal state or oxygen compounds which have a low valence. In this way the vaporization of uranium is made easier. There follows a description of spectral analysis. The spectrograph produced by the firm of Hilger was used,

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The Spectrometric Determination of Low Uranium Content in Natural Samples

32-11-22/60

alternating current arc: 220 V / 7 A, the electrode consisted of electrolytic copper, had a diameter of 8 mm, and an indentation where the crust of the sample could be fastened; the films "Ilford Ordinary" and "HMKQ M", type 2 (fine-grained) were used. The method was tested with several kinds of ores, and the results obtained were compared with those obtained by chemical and luminescence methods. A further examination was carried out by adding admixtures of uranium in certain quantities to the already investigated samples for reasons of comparison. The results obtained were satisfactory. There are 1 figure, 3 tables, and 4 references, 1 of which is Slavic.

ASSOCIATION: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

AVAILABLE: Library of Congress

Card 2/2

5(4)

AUTHORS:

Moroshkina, T. M., Prokof'yev, V. K.

SOV/54-59-2-21/24

TITLE:

Spectral Determination of Microquantities of Ti, Nb and Ta in Natural Materials (Spektral'noye opredeleniye mikrosoderzhanii Ti, Nb i Ta v prirodnykh materialakh)

PERIODICAL:

Vestnik Leningradskogo universiteta. Seriya fiziki i khimii. 1959, Nr 2, pp 143-148 (USSR)

ABSTRACT:

The separation and determination of the elements mentioned in the title by chemical methods is very difficult, especially when they are present in microquantities. In this connection, the emission spectroscopy has gained great importance for the determination of these elements. In fact, these spectra are also very complicated, but it was possible to separate spectral lines of the elements Ti, Nb, Ta which are not superposed by the spectra of the accompanying elements, and which do not overlap one another. These lines which can be used as analytical lines are: Ti - 4305.92 Å, Nb - 2927.81 Å, Ta - 2933.55 Å, Nb - 2950.88 Å, Ta - 2951.9 Å. The lines of U ( $\lambda = 4297.11$ ) or Cr ( $\lambda = 4297.73$  Å) were used as comparative lines for Ti. The Nb- and Ta-lines served as intrinsic standards.

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Spectral Determination of Microquantities of  
Ti, Nb and Ta in Natural Materials

SOV/54-59-2-21/24

Besides, Fe with the line  $\lambda = 2929.01 \text{ \AA}$  was used for the comparative determinations of the latter. The characteristics (intensity and excitation energies) of the mentioned lines are represented in table 1. The investigations were carried out on a large self-collimating plant of the Hilger firm. The photographed spectra were recorded by a photometer MF 2. The method used was the integrating method. The emission lines were excited by an a.c. arc. A special tub, which is shown in figure 1, was used for the insertion of the samples between the carbon electrodes. To determine the time of exposition, the evaporation curves of the elements to be investigated in dependence on time were plotted (Fig 2). An exposition time of 2 minutes was chosen for Ti. The results of measurement for the Ti-determination from 20 different investigations of the ore Nr 5 are compiled in table 3, those of the ores Nrs 5 and 63 in table 2. The mean deviation of the 20 different investigations was not more than 12%. A comparison of the values in table 2 with data of chemical analysis showed a good agreement. The investigations for the determination of Ti were carried out in an interval of  $5 \cdot 10^{-4} - 0.5\%$ . The simultaneous determination

Card 2/3

Spectral Determination of Microquantities of  
Ti, Nb and Ta in Natural Materials

SOV/54-59-2-21/24

of Nb and Ta (for data see tables 4 and 5) was possible for 0.01% to 1%. For smaller quantities, the determination was only possible if they were present in the materials in a ratio of 1:1 to 1:2. If this ratio was not attained, it was only possible to determine the element of the higher quantity. A comparative investigation with iron as intrinsic standard showed good agreement, A. I. Kirilenko and L. A. Cheburina took part in the experimental work. The values of the excitation potential of Nb were taken from the tables by Humphreys and Meggers (Ref 1), those for chromium from the table by Kiss (Ref 2). There are 2 figures, 5 tables, and 4 references, 2 of which are Soviet.

Card 3/3



MOROSHKINA, T.M.; PROKOF'YEV, V.K.

Spectrum determination of the microcomponents Ti, Pb and Fe in  
natural materials. Vest.LGU 14 no.10:143-148 '59.  
(MIRA 12:6)  
(Rocks--Analysis) (Spectrum analysis)

WASH. D.C. PROSECUTIVE, V.I.

1. [illegible]

2. [illegible]

3. [illegible]

(10/11/68) (Specimen)

(Revised: 11/1/68)

(Observed, 11/1/68) (Quantitative)

MOROSHKINA, T.M.; ABRAMYCHEV, Yu.V.

Spectroanalytical determination of molybdenum in tungsten trioxide, and of tungsten in molybdenum trioxide. Vest.LGU  
15 no.10:161-163 '60. (MIRA 13:5)  
(Molybdenum--Spectra) (Tungsten--Spectra)

53.  
~~5 (2)~~  
C/002/60-026-02/001/003  
FOC3/FOC1

AUTHORS: T. M. Moroshkina and Yu, Ju-ching (H. C. 胡)

TITLE: The Separation of Niobium and Tantalum by Paper Chromatography

PERIODICAL: Hua Hsueh Hsueh Pao, 1960, Vol 26, Nr 2, pp 55-59

STRACT: Using a special paper chromatography technique, by a "continuous evaporation process," the authors arrived at satisfactory results relative to the separation of niobium and tantalum. These elements were separated in solutions of relative high concentrations. The technique is given in detail: essentially an evaporation process is responsible for filterability. An Nb and Tl 6-8% HF solution containing 50 mg/ml of Nb and Tl, and 120 mg/ml of  $\text{NH}_4\text{F}$  was used with the filtering paper. Eleven organic solvents were tried before a satisfactory one was employed; acetone was determined the most efficient. With acetone-water (91:9, v/v) as solvent, and using a 20 cm paper strip; Tl could be completely separated from the Nb element and deposited on the paper chromatogram within 6-8 hours. When an 1:1 v/v mixture of acetone and moist ether was used as a solvent, traces of Ta could be

Card 1/2

82056

The Separation of Niobium and Tantalum by Paper Chromatography (Cont.)

/002/60/026/02/001/003

FO03/FO01

separated from a large portion of Nb. There were 12 references of which 3 were American, 2 British, 1 French, 2 German 2 Russian, 2 unidentified.

ASSOCIATION: Department of Chemistry, University of Leningrad

DATEMITTED: 30 January 1959

X

5 1/2

FOUO/FOUO 26/02/002/003  
FOUO/FOUO

AUTHORS: T. M. Moroshkina and Yu. Ju-ching

TITLE: The Spectrochemical Determination of Tantalum and Titanium in Pure Niobium

PERIODICAL: Hua Hsdeh Hsdeh Pao, 1960, Vol 26, Nr 2, pp 73-78

ABSTRACT: Traces of tantalum in niobium with Ta content  $\leq 0.2\%$  could be determined spectrographically with a fair degree accuracy, if and when tantalum had been concentrated by paper chromatography prior to the spectrochemical analysis. Traces of Nb in Ta did not interfere with the determination. Tantalum in the form of  $Ta_2O_5$ , together with Mo in the form of  $NH_4$ -molybdate, used as an internal standard, was introduced in the crater 1.2 mm deep in the supporting carbon electrode. Standard samples containing known amounts of Ta were also made. When the arc was excited with an A.C. with 14 amp., the Ta vaporized completely within  $2\frac{1}{2}$  min. The lines  $Ta_{2685.11}$  and  $Mo_{2684.14}$  were chosen. The difference between the optical densities of these lines were plotted against the concentration of Ta. Using 100 mg samples, the  $Ta_2O_5$  content as small

Card 1/2

82057

The Spectrochemical Determination of Tantalum and Titanium in Pure Niobium  
(Cont.)

C/002/60/026/02/002/003

FO03/FO01

as 0.025% in niobium could be estimated with a precision of  $\pm 6\%$ , and a sensitivity limit of 0.01%. The spectrochemical determination of Ti in Nb was carried out by vaporizing Ti (in the form of  $Ti_2O_5$ ) in a copper arc excited with an A.C. of 14 amps. The lines  $Ti_{4981.73}$  and  $Nb_{4953.12}$  were chosen, the latter line being used as an internal standard. Owing to the difficulty of procuring Ti-free Nb to prepare standard samples, an estimation was made by adding known amounts of Ti to the sample. The precision was  $\pm 9\%$ , while the estimated sensitivity limit was about 0.01%. There were 7 references, one was American, all others Russian.

ASSOCIATION: Department of Chemistry, University of Leningrad

SUBMITTED: 15 September 1959

2 11 - 1/2

✓

MOROSHKINA, T.M.; YUY ZHU-CHIN [Yū Ju-ch'in]

Separation of niobium from tantalum by paper chromatography with  
the use of a new method the continuous evaporation of the solvent.

Uch. zap. LGU no.297:26-40 '60.

(MIRA 13:11)

(Niobium)

(Tantalum)



MOROSHKINA, T.M.; YUY ZHUR-CHIN [Yü Ju-ch'in]

Spectrochemical determination of tantalum and titanium impurities  
in "pure" niobium. Uch. zap. LGU no.297:155-161 '60.

(MIRA 13:11)

(Tantalum--Spectra) (Titanium--Spectra) (Niobium--Analysis)

MOROSHKINA, T.M.; MALININ, G.F.

Spectrochemical determination of small amounts of aluminum and silicon in niobium pentoxide. Zhur.anal.khim. 16 no.2:245-247  
Mr-Apr '61. (MIRA 14:5)

1. Zhadanov Leningrad State University.  
(Aluminum--Spectra)  
(Silicon--Spectra)  
(Niobium oxide--Spectra)

S/075/62/017/008/002/004  
E071/E135

AUTHOR: Moroshkina, T.M.

TITLE: Concentration of small quantities of uranium on ion exchange resins followed by its spectrographic determination

PERIODICAL: Zhurnal analiticheskoy khimii, v.17, no.6, 1962, 963-965

TEXT: On direct spectral determination of uranium in rock samples there is some decrease in the intensity of its spectral lines due to the interference of other elements present. For this reason the possibility of concentrating uranium on a cationite from its sulphuric acid solutions containing considerably larger quantities of zirconium than uranium was investigated. A strongly acid sulphocationite KY-2 (KU-2) in H<sup>+</sup> form was used. A study of the influence of pH of the solution on the degree of adsorption of uranium and zirconium by the cationite, has shown that from 0.2-0.35N sulphuric acid, uranium is completely adsorbed while 70-90% of zirconium passes into the filtrate. This was used as a  
Card 1/3

Concentration of small quantities ...

S/075/62/017/008/002/004  
E071/E135

basis for the analytical method. The calibration curve was obtained using artificial solutions of uranium and zirconium salts. After filtering 10 ml of the solution through 0.5 g of the cationite and addition of 20 mg of CuO and 0.05 ml of 0.1% solution of ammonium tungstate (internal standard), the cationite was dried, ignited and sintered into a button which was used for spectral analysis and construction of the calibration curve. The results of spectral determination of uranium were confirmed by the vanadometric method. The method developed was checked on mineral specimens containing uranium, beryllium, zirconium, vanadium, molybdenum, titanium and tungsten. The samples were decomposed with concentrated sulphuric acid and ammonium sulphate filtered, the filtrate neutralised with ammonia to 0.25-0.35N concentration of sulphuric acid and uranium determined as above. It is concluded that the proposed method is suitable for determining small quantities of uranium in rocks containing zirconium. Uranium quantities of  $10^{-5}$  g (0.005%) and more can be reliably determined in ores with the ratio of uranium to zirconium up to 1 : 250. The accuracy of the method is 8 - 10%.

Card 2/3

Concentration of small quantities...

S/075/62/017/008/002/004  
E071/E135

There are 1 figure and 4 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im.  
A.A. Zhdanova  
(Leningrad State University imeni A.A. Zhdanov)

SUBMITTED: February 13, 1962

Card 3/3

ACCESSION NR: AP4010239

S/0054/63/000/004/0172/0173

AUTHORS: Smirnova, M. N.; Moroshkina, T. M.

TITLE: Spectral determination of small amounts of hafnium and thorium in naturally occurring materials

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, vyp. 4, 1963, 172-173

TOPIC TAGS: rare earth element, hafnium, thorium, quartz, feldspar, iron, spectrograph, spectral determination, hafnium ore, thorium ore, hafnium sulfate, thorium nitrate

ABSTRACT: The determinations were conducted by means of a JSP-51 spectrograph, the selected analytical line for thorium being at 4381.86 Å, and the hafnium lines within the 4220-4400 Å range, with the iron line serving as a check. To 20-mg aliquots of a feldspar-quartz blend were added 0.1-5.0 micrograms of thorium nitrate and 0.2-5.0 micrograms of hafnium sulfate. The mixture was calcined and placed in a 2 x 5-mm bore of a carbon electrode, where it underwent complete combustion within 1.5-2 minutes in the arc of an a.c. 15 amp current. The error

Card 1/2

ACCESSION NR: AP4010239

of determination amounted to 1-20% for thorium and 2-20% for hafnium. In another series of tests, two samples each of thorium and hafnium ores were analyzed for thorium and hafnium, followed by the addition of known quantities of these elements. The analysis was then repeated in duplicate. For thorium, the deviation from the average amounted to 10.5 and 15.9%, while for hafnium it was 0.07 and 11.60%. Orig. art. has: 1 chart and 3 tables.

ASSOCIATION: none

SUBMITTED: 24Oct62

DATE ACQ: 03Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 006

OTHER: 001

Card 2/2

MOPOBHEHHA, T.M., SMENOVA, M.N.

Simultaneous spectral determination of zirconium, hafnium,  
thorium, and uranium in ores. Zhur. anal. khim. 1960, 35,  
215-217, 1 fig. (USSR) ENBA 1719

Leningradskiy gosudarstvennyy universitet imeni Zhdanova.



L 35393-65 EMT(m)/EPF(n)-2/ENP(t)/ENP(b) Pu-lr IJP(c) JD/WW/JC

ACCESSION NR: AP5001466

S/0075/64/010/012/1510/1521

AUTHOR: Moroshkina, T. M.; Smirnova, M. N.

TITLE: Spectrochemical determination of traces of titanium, zirconium, hafnium and thorium in solutions

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no. 12, 1964, 1519-1521

TOPIC TAGS: arc spectrum, spectrochemical analysis, ion exchange, preconcentration, titanium, zirconium, hafnium, thorium, trace analysis

ABSTRACT: There are no satisfactory methods for the simultaneous determination of micro amounts of the elements of the fourth group and thorium. In this work a method was developed for emission spectroscopic determination of Ti, Zr, Hf and Th in solutions (less than 1 µg/ml) after preconcentration by extraction and ion exchange. Use was made of the ability of 8-hydroxyquinoline complexes of Ti, Zr, Hf and Th to be extracted with chloroform at pH 1.5 - 4.6. The study was carried out also with solutions containing in addition to the above elements

Card 1/2

L 25393-65

ACCESSION NR: AP5001466

small amounts of Fe, Al, Ca, Mg, K, Na, Nb and Ta, totalling up to 1 g/ml. Such quantities of these elements are frequently found in natural waters and biological fluids. The sensitivity of this method is down to 5  $\mu$ g of elements in question in the sample of 0.0005  $\mu$ g/ml. The average deviation of a single determination from the mean is  $\pm 8-9\%$ . Orig. art. has: 1 table

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova  
(Leningrad State University)

SUBMITTED: 13Feb64

ENCL: 00

SUB CODE: GC

NR REF SOV: 003

OTHER: 000

Card 2/2

L 36256-65 EWT(m)/EPF(n)-2/EMP(t)/EMP(b)

ACCESSION NR: AT5007810

S/0000/64/000/000/0038/0041

AUTHOR: Smirnova, M. N.; Moroshkina, T. M.

TITLE: Determination of small amounts of zirconium in natural materials by spectral analysis

SOURCE: Leningrad, Universitat, Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements). Leningrad, Izd-vo Leningr. univ., 1964, 38-41.

TOPIC TAGS: zirconium determination, ore analysis, spectral analysis, zirconium iodide

ABSTRACT: A method was developed for the spectrophotometric determination of microgram and trace quantities of zirconium in ores and other minerals. Zirconium was determined by the analytic line  $ZrI\ 4347.89\ \text{\AA}$ , using the line  $CrI\ 4344.51\ \text{\AA}$  as an internal standard. In 1:4 ore/copper powder mixtures zirconium was vaporized within 3 min. in 15 amp. alternating current arcs and  $5\ \mu\text{g}\ Zr$  was required for detection of the analytic line at 2 min. exposure. Smaller amounts of zirconium were determined by an addition technique, using extrapolation by a calibrating graph or calculation by a mathematical model based on the least square

Card 1/2

J. 36256-65

ACCESSION NR: AT5007810

method. The latter technique permitted determination of 5.0-0.025  $\mu$ g Zr with 20% maximum relative error and of 1.48-7.40  $\mu$ g Zr in ores with 0.5-14.9% relative error. Orig. art. has, 2 figures, 2 tables and 6 formulas.

ASSOCIATION: none

SUBMITTED: 28Sep64

ENCL: 00

SUB CODE: MM, GC

NO REF SOV: 005

OTHER: 001

Card 2/2 JO

1-36252-65 EPA(s)-2/EWT(m), EWT(t)/EMP(b) Pt-10 JJP(s) JD/JG/65  
ACCESSION NR: AT5007811 S/0000/64/000/000/0002/0007

AUTHOR: Moroshkina, T. M.; Panichev, N. A.

TITLE: Spectroscopic determination of potassium and rare earth elements in the system KCl - (rare earth element) Cl sub 3

SOURCE: Leningrad, Universitet, Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements), Leningrad, Izd-vo Leningr. univ., 1964, 42-47

TOPIC TAGS: potassium determination, rare earth determination, rare earth chloride, spectral analysis

ABSTRACT: A spectroscopic method was developed for the quantitative determination of chlorides of potassium, lanthanum, cerium, praseodymium and neodymium in binary and multi-component systems, produced during the thermal separation of rare earth elements. Potassium and rare earth elements were determined separately because of their widely different volatilities. The analytic lines 4044.14 and 4047.20 A were used for determining potassium and the homogeneous distribution of samples in the channel of the carbon electrode was secured by applying the chloride solution to a piece of filter paper which had been inserted into the channel. 1/2 A calibration graph was obtained and an average relative error of 1



L 36252-65

ACCESSION NR: AT5007811

2-4% was established for determining potassium. Zil'bershteyn's method (Zav. Lab. v. 21, 1955, 342) was selected for determining the rare earth elements by the lines LaII 3921.54, LaII 3929.27, CeII 3942.75, PrII 3956.16 and NdII 3951.50 A, using SmII 3946.50 A as internal standard. The use of a samarium reference eliminated the effect of potassium concentration on the analytic results since potassium decreased equally the intensity of both the reference lines and the lines of the rare earth elements. The average relative error for determining the rare earth elements was approximately  $\pm 4-6\%$ . Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 28Sep64

ENCL: 00

SUB CODE: IC, GC

NO REF SOV: 005

OTHER: 000

Card 2/2

I 36251-65 EWI(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 TJP(c) JD/WH/JG/GS  
ACCESSION NR: AT5007812 8/0000/64/000/000/0048/0051

AUTHOR: Moroshkina, T. M.

TITLE: Spectroscopic determination of uranium on a beryllium background

SOURCE: Leningrad, Universitet. Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements). Leningrad, Izd-vo Leningr. univ., 1964, 48-51

TOPIC TAGS: uranium determination, beryllium analysis, spectral analysis, beryllium oxide analysis, interfering element

ABSTRACT: A spectrophotometric method was developed for determining uranium in concentrated sulfuric, nitric or hydrochloric acid containing large amounts of beryllium and traces of calcium, magnesium and silicon, and in beryllium oxide powder containing less than 1% uranium and admixtures of aluminum, iron, silicon, magnesium and lead. Uranium was determined in 1:3 mixtures of beryllium oxide/copper powder and solutions were mixed with beryllium oxide/feldspar and subsequently with copper powder. The analytic line U 4090.13 A, and the reference lines Mo 4066.0 or 4069.9 A were used. Results obtained with a calibration graph or by an addition technique were in good agreement and the average relative error

Card 1/2

1 36251-68

ACCESSION NR: AT5007812

was 5% for determining 15-110  $\mu$ g uranium in the presence of large amounts of beryllium, the absolute maximum error not exceeding  $\pm 2 \mu$ g. The sensitivity of the method for uranium was found to decrease in mixtures with beryllium, but this effect was less pronounced in mixtures with copper powder. "M. N. Smirnova and M. P. Semov took part in the work." Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 28Sep64

ENCL: 00

SUB CODE: IC, GC

NO REF SOV: 004

OTHER: 003

Card 2/2 20



NOROSHKINA, T.M.; SMIRNOVA, N.M.

Spectrochemical determination of traces of titanium, zirconium,  
hafnium, and thorium in solutions. Zhur. anal. khim., 1964, 41, 12,  
1519-1521. 164. (R. A. Phil.)

I. A. A. Zhdanov Leningrad State University.

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ACC NR: A.740.711

SOURCE CODE: UR/0074/62/022/001/0164/0167

AUTHOR: Marozhkina, T. M.; Ivanova, T. M.

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: Determination of niobium and tantalum in wolframites

SOURCE: Zhurnal analiticheskoy khimii, v. 22, no. 1, 1967, 164-167

TOPIC TAGS: niobium, tantalum, spectrographic analysis

ABSTRACT: A rapid quantitative method was developed for the direct spectral determination of niobium and tantalum in wolframites. A DFS-13 spectrograph was employed. Artificial mixtures simulating the composition of wolframites were used because no natural wolframites containing very low amounts of Nb (0.005-2%) and Ta (0.01-2%) were available. Nb and Ta were determined by the method of three standards using the analytical lines Ta 2635.9 - Mo 2672.8 and Nb 2671.9 - Mo 2672.8. The sensitivity of the method was 0.01% for Ta<sub>2</sub>O<sub>5</sub> and 0.005% for Nb<sub>2</sub>O<sub>5</sub>. This is not the limit for the proposed method, but at lower contents, Ta and Nb will have to be separated from the bulk of tungsten if the spectral determination is to succeed. Authors regard it as their pleasant obligation to thank V. F. Barabanov for providing the wolframite samples and for his constant interest in this work. Orig. art. has: 5 tables.

SUB CODE: 07/ SUBM DATE: 30Jun65/ ORIG REF: 006/ OTH REF: 001

Card 1/1

UDC: 543.70

ACCESSION NR: AP4040670

8/0075/04/019/006/0721/0724

AUTHOR: Moroshkina, T. M.; Mel'nikov, Yu. A.

TITLE: Study of conditions for the chromatographic separation of tungsten from titanium, manganese and nickel followed by spectrographic determination of these elements.

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no. 6, 1964, 721-724

TOPIC TAGS: tungsten, titanium, manganese, nickel, chromatographic separation, spectrographic analysis, KU 2 cationite.

ABSTRACT: A method was worked out for determining Ni, Mn and Ti impurities in tungsten trioxide comprising preliminary chromatographic separation of tungsten from the impurities and subsequent spectral analysis of these elements. The Ni, Mn and Ti are concentrated under static conditions on the cationite KU-2 and tungsten is washed out in the filtrate after treatment with 1%  $H_2O_2$  in weak acid (0.1 N HCl) which converts the tungsten to pertungstic acid. Almost complete sorption of the Ni, Mn and Ti is effected in  $\frac{1}{2}$ -4 hours. Traces of tungsten mechanically retained on the cationite are washed out with 0.05 N HCl solution containing 1%

Card 1/2

ACCESSION NR: AP4040670

H<sub>2</sub>O<sub>2</sub>. The adsorbent resin containing the Ni, Mn and Ti is then burned in a muffle furnace at 600C for 30 minutes. Samples for spectral analysis are then prepared with the residue. The sensitivity of the method is down to 10<sup>-3</sup>% with a relative error not exceeding 15%. Orig. art. has: 4 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova  
(Leningrad State University)

SUBMITTED: 28Jun63

SUB CODE: IC

NO REF SOV: 007

ENCL: 00

OTHER: 000

Card 2/2

MOROSHKINA, T.N.

6/49T37

USSR/Geography  
Agrakhanskiy Peninsula  
Expeditions

Jul/Aug 49

"Collecting Data on the Agrakhanskiy Poluostrov  
(Peninsula)," O. K. Leont'yev, T. N. Moroshkina,  
Inst of Oceanol, Acad Sci USSR, 4 pp

"Iz Ak Nauk SSSR, Ser Geog i Geofiz" Vol XIII, No 4

Indicates sources of the entry of alluvia to form  
the Agrakhanskiy Poluostrov. Discusses genesis of  
this complicated accumulative coastal formation on  
the basis of morphological data collected during  
Caspian Expedition of Inst of Oceanol, Acad Sci USSR,  
in 1948. Submitted by Acad P. P. Shirshov 27 Feb 49.

60/49T37

USSR/Virology - Human and Animal Viruses.

E

Abs Jour : Ref Zhur Biol., No 1, 1959, 503

Author : Moroskin, N.I., Khersonskaya, R.Ya., Duslenko, A.I.

Inst : Academy of Medical Sciences USSR

Title : Data of the Institute of Infectious Diseases Med. Acad.  
Sci. USSR on Characteristics of Clinical Course of  
Asiatic Grippe "A-57"

Orig Pub : Vestn. Akad. med. nauk SSSR, 1958, No 3, 12-20

Abstract : No abstract.

Card 1/1

15

*Моросников, И.А.*  
MOROSNIKOV, I.A.; SEREDIN, P.I.; FEDOTOV, F.V.

Effect of the conditions of fracture on the fractured surfaces of  
rods from alloys LS59-1 and BrAZh9-4. TSvet.met. 28 no.4:59-66  
Jl-Ag '55. (MIRA 10:11)

(Bronze--Testing)

(Brass--Testing)



MOROSNIKOV, I.A.

Inactivation of low-temperature annealing of brass rods. TSvet.  
met. 29 no.5:64-70 Ky '56. (MLRA 9:8)  
(Brass--Heat treatment)

AUTHOR: Morosnikov, I.A., and Sushin, V.G. 290  
TITLE: Reasons for crack-formation in pipes of type LZhMts59-1-1 Alloy and their elimination. (Prichiny obrazovaniya teshchin na trubakh iz splava marki LZMts59-1-1 i ustranenie ikh.)  
PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals), 1957, No. 1, pp. 32 - 35, (U.S.S.R.)  
ABSTRACT: Elliptical tubes made from a certain type of brass were found to have cracks on their external surfaces, orientated approximately perpendicularly to and at an angle of 45° to the tubes axis. Cracked tubes have been subjected to mechanical and microstructural investigation, parallel investigations being made of the effect of heat treatments on alloy properties. It is concluded that the following measures are essential for avoiding crack formation: a) hot-pressed tubes, cooled in water, to be annealed at 550 °C with a soaking of one hour; b) tubes after annealing to be cooled from a temperature not over 350 °C.

There are 7 figures and 1 Russian reference.





SOV/13 07/12/21

Elimination of Low-Temperature Straightening of Type LS 3-3 Tubes. R. 13  
of LS3-3 tubes and low temperature straightening.  
straightening. There are 4 tubes.

ASSOCIATION: Kol's Aginskij and G. Kol'skiy G. Kol'skiy  
(Kol'skiy Aginskij and G. Kol'skiy Metals Treatment Works)

Carl 3/3

MOROSOV, A. N.

S

Determination of Hydrogen in Steel. A. N. Morosov.  
(Zavodskaya Laboratoriya, 1947, vol. 13, pp. 1485-  
1487). [In Russian].

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

PA 24/49799

USSR/Metals

Iron Alloys  
Hydrogen

Dec 48

"Solution of Hydrogen in Fluid Iron and Alloys  
With Titanium, Niobium and Tantalum," M. M.  
Karmukhov, Corr Mem, Acad Sci USSR, A. N. Morosov,  
16 pp

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 12

Investigates process of dissolving hydrogen in  
liquid iron, studying influence of temperature  
and pressure, and clarifying kinetics of the proc-  
ess. Considers possibility of hydrides forming  
in liquid iron which is alloyed with elements that

24/49799

USSR/Metals (Contd)

Dec 48

form more stable compounds with hydrogen.

MOROSOV, A.N.

24/49799

MOROSOV, A. N.

" The Conditions of Nitrides' Formation in FeV, Fe Ti and Fe Al Melts. "  
Paper to be presented at the Physical Chemistry and Technology  
of Steelmaking Symposium to be held in the US (Dedham, Massachusetts)  
June 1962.

1. Research Institute of Metallurgy in Chelyabinsk.



EXCERPTA MEDICA Sec 4 Vol 12/5 Med. Micro. May 59

1378. EXPERIMENTS OF TITRATION OF IMMUNOGENIC PROPERTIES OF  
SMALLPOX VACCINE (Russian text) - Morosov M. A. and Korol-  
kova M. I. - ZH. MIKROB. EPID. I IMMUNOBOL. 1957, 7 (7-10)  
Tables 3

The principle of a proposed method of titration is presented. The number of rabbits surviving a subdural infection with neurolapin is directly proportional to the immunogenic potency of a vaccine strain, the animals being simultaneously vaccinated intradermally. Each experiment is carried out with 6 rabbits. Subdural infection of 6 rabbits with neurolapin is used as a control. Kaulen - Moscow (IV, 17)

EXCERPTA MEDICA Sec 4 Vol 12/5 Med. Micro. May 59

1512. COMPARATIVE EVALUATION OF THE METHODS OF DETERMINATION OF IMMUNOGENIC PROPERTIES OF VARIOUS STRAINS OF SMALLPOX VACCINE (Russian text) - Morosov M. A. and Konstantinova V. I. ZH. MIKROB. EPID. I IMMUNOBIOLOG. 1957, 10 (75-78) Tables 3

Three methods of titration of antivaccinal sera were used. Hyperimmune sera in rabbits were obtained with 5 virus strains. The first method is based on infiltration of the rabbit's skin with different dilutions of antiserum. After 2 hr. the skin is scarified and vaccine is applied. After 96 hr. the percentage of square area covered with pox vesicles is determined and compared with a control. The 2nd method is based on intracerebral introduction in mice of antiserum adsorbed with vaccine, and determination of survival. This method proved to be unsuitable because the mice did not die. The 3rd method is based on the haemagglutination-inhibition reaction of antiserum. It is concluded that the first method is the most feasible.

Kaulen - Moscow (IV, 17)

COUNTRY : USSR.  
 INSTITUTE : Zoological Parasitology, Acarids and Insects as Disease Vectors, Inst. Zool.  
 ADDRESS : Khark., U.S.S.R., 61009.  
 AUTHORS : Sharanovich, F. H.; Morosova, I. V.  
 INST. : Astrakhan Anti-Plague Station.  
 TITLE : Seasonal Changes of the Fleas' Numbers in the Gushliks' Burrows Under Various Landscape-Ecological Conditions.  
 JOURNAL : Sb. tr. Astrakhansk. profilnochn. st., 1949, vyp. 1, 379-386.  
 SUMMARY : According to observations, conducted in 1947-1949 on black earths, the abundance indices (1) of *Neorhysis setosa* on the small gushliks and in the entrances of their burrows (vertical and inclined) were maximal in March-April and sharply diminished from the second half of May. 1) of *Peritrichus leucopus* in the entrances in March-April were small and were still diminishing in the first half of May. Later on, they increased in numbers and attained the maximum quantity in June; after that, they

CARD: 1/3

COUNTRY :  
CATEGORY :

ABS. JOUR. : RZhBiol., No. 14, 1958 No. 62689.

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : sharply decreased in numbers towards the end of July. Besides *N. setosa* and *C. tesquorum* in the burrows' entrances were collected fleas from 9 additional species (the most abundant, *Frontopsylla volgensis*, *Otenophthalmus secundus* and *Pulex irritans*). In March of 1949, an accumulation of fleas on the ground's surface in fresh rakes from the inclined ashlake burrows were observable in the mornings. Out of

CARD: 2/3

32

CARD: 3/3

MOROSOVA, O. Ye. et al.

"Catalytic Cracking of Petroleum Heavy Fractions," Trudy Inst. Nefti,  
No.6, 1955

Translation D 399743

L 00725-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)

ACCESSION NR: AT5013292

UR/3043/65/000/004/0232/0241

AUTHOR: Morozova, T. K., Sadkov, Yu. N., Chudov, L. A.

29  
28 B+1

TITLE: Difference method for the solution of the problem of gas motion through variable cross section tubes

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 4, 1965. Chislennyye metody v gazovoy dinamike (Numerical methods in gas dynamics), 232-241

TOPIC TAGS: ideal gas, ideal flow, flow analysis, difference method

ABSTRACT: The papers investigate the flow of an ideal gas within a variable cross section tube whose radius is given by the continuous function  $r(x)$  ( $0 \leq x \leq x_3$ ):

$$r(x) = \begin{cases} a & \text{при } 0 \leq x \leq x_1, \\ r_1(x) & \text{при } x_1 < x < x_2, \\ b & \text{при } x_2 \leq x \leq x_3. \end{cases}$$

A piston with mass  $M$  and negligible thickness is held fixed at the point  $x = x_2$ . The pressure of the gas to the left of the piston is larger than on the right.

Card 1/2

L 00725-66

ACCESSION NR: AT5013292

Using equations for unidimensional gas motion the author calculates the motion of the piston due to the pressure difference after the instant  $t = 0$  when the piston is released. Computations were carried out on the "Strela" computer of the Vychislitel'nyy tsentr (Computer Center) of the MGU. The time needed for the calculation of a layer 290 points thick is 1 min (layers were fixed by specific chosen mass increments). One of the complete solutions required 40 min of computer time. Gas velocity graphs show a comparison between curves calculated by the method of differences and by the method of characteristics (the former exhibits a fine structure as compared with the latter). Orig. art. has: 19 formulas and 2 figures.

ASSOCIATION: Vychislitel'nyy tsentr, Moskovskiy universitet (Computer Center, Moscow University)

SUBMITTED: 00

ENCL: 00

SUB CODE: MA, ME

NO REF SOV: 003

OTHER: 001

Card 2/2

MOROTIN, Ye.

Fire on the road. Za bezop. dvizh. 5 no.3:9 Mr '63.  
(MIRA 16:4)

1. Otdel regulirovaniya ulichnogo dvizheniya, Gosudarstvennaya  
avtomobil'naya inspektsiya.  
(Moscow—Traffic accidents)



MOROTSKAYA, V.I., inzh.

Seminar on flame photometry. Zav.lab. 26 no.2:252 '60.  
(MIRA 13:5)

1. Ural'skiy Dom tekhniki.  
(Flame photometry)

RUS'YANOVA, N.D.; MOROTSKIY, O.A.

Vapor-phase catalytic oxidation of phenanthrene. Zhur.  
prikl. khim. 36 no.9:2085-2088 D '63. (MIRA 17:1)

1. Ural'skiy politekhnicheskii institut imeni S.M. Kirova.

SUSLOV, Nikolay Ivanovich, inzh.; GROGPR'YEV, A.; elseu Dmitriyevich,  
kand. tekhn.nauk; PIMENOV, Igor' Veniaminovich, inzh.;  
SUSOROVA, Valentina Ivanovna, inzh.; KRESTNIKOV, Yevgeniy  
Pavlovich, inzh.; MOROTSKAYA, Valentina Ivanovna, inzh.;  
BASARGINA, Tamara Vasil'yevna, inzh.; ZAYTSEV, Pavel  
Aleksseyevich, inzh.; PODOL'SKIY, A.V., inzh., retsenzent;  
LESIK, A.I., inzh., retsenzent; BASARGINA, T.B., inzh.,  
retsenzent; BAGIN, Yu.I., inzh., retsenzent; DUGINA, N.A., red.

[Nonmetallic materials] Nemetallicheskie materialy; spravochnik.  
Pod red. N.I.Suslova. Moskva, Mashgiz, 1962. 360 p.  
(MIRA 16:3)

(Nonmetallic materials)

SERGOVANTSEV, V.T.; ARTEMOV, V.A.; ZHERNOVOY, M.N.; MOROTSKIY, L.P.

Using the pipes of a gas pipeline as a remote-control channel.  
Gaz.delo no.1:14-16 '64. (MIRA 17-4

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza i  
Minskoye upravleniye magistral'nykh gazoprovodov.

MAWELL, E.

"Highly efficient... [and]... civil servant"; "J. J. O'Donnell" (Kali Kallian) "member, Vol. , No. 7", Jan./Feb. 1968.

Source: Ann. Hist. Nat. Acad. Sci. (Linn.) 41: 189. 1898, Vol. 1, No. 11, 11 October 1898.

MOROTZ, Kalman, Dr., okl. gépészmérnök-kozágazdász, üzemtánułmányí  
és szervezési csoport vezetője

The role of various factors in the development of wages  
in mining. Bany lap 94 no.5:317-326 My '61.

1. Tatabányai Szenbányászati Troszt, Tatabánya.

MOROTZ, Kalman, Dr., okl.gepeszmernok, kozgazdasz

An addition to the article entitled "Role of various factors  
in the evolution of miners' wages." Bany lap 94 no.7:470-471  
Jl '61.

1. Tatabányai Szenbányászati Troszt.

MOROTZ, Kalman, dr., okleveles gépészmérnök, okleveles közgazdász

Examination of the economy in the mechanization of coal mining. Pany  
lap 97 no.7:443-449 JI '64.

1. Division Chief, Tatabánya Coal Mining Trust, Tatabánya.



MOROTZ, Kalman, dr., okleveles gépészmérnök, okleveles közgazdász

Study on the economy of mechanization in coal mining. Bany 120  
97 no.8:524-531 Ag '54.

1. Division Chief, Tatabanya Coal Mining Trust, Tatabanya.

MOROV, G.

Stereophic sound systems. IUn.Tekh, 4 no.5:16-19 My  
'60. (MIRA 13:7)

(Stereophonic sound systems)

MOROV. M

USSR/Geography

Card 1/1 Pub. 77 - 13/20

Authors : Morov, M.

Title : Wrangel Island

Periodical : Nauka i zhizn' 21/12, 33-34, Dec 1954

Abstract : An account is given of the discovery of Wrangel Island by Wrangel in the early part of the 19th century and the eventual establishment of an observation post on it in 1924. The coordinates of the island's location are stated, and a description of the animal life is given, which includes such animals as the polar bear and the walrus. At the present time along with the scientific observation post there exist such institutions as a hospital, school and factory for the families of Soviet hunters and eskimos who were brought there. Illustrations.

Institution : ...

Submitted : ...

MOKOV, M

USSR/ Electronics - Radio

Card 1/1 Pub. 89 - 5/24

Authors : Sergeyev, V.; Morov, M.; Titovskiy, I.; Bogomolov, A.; Lapshin, Yu;  
Ivanov, A.; and Rogachev, V.

Title : Over thousands of kilometers

Periodical : Radio 5, page 11, May 1955

Abstract : Brief messages from various Soviet expeditions (Antarctic, Vrangeli Island, Indian Ocean, Uedineniye Island, Cape Schmidt) praising the great achievements of Soviet radio communications system. Illustrations.

Institution : .....

Submitted : .....